

What is claimed is:

1. A medical image processing system for visualizing plural medical images of a subject in multi-format on a single image plane on one of a film sheet and a screen, comprising:

a radiographing section for radiographing the subject so as to generate plural sets of image information in which each set of image information includes medical image information and radiograph-related information related to at least one of the subject and the radiographing section;

an extracting section for extracting plural sets of radiograph-related information from the plural sets of image information;

a calculating section for conducting calculation for the plural sets of radiograph-related information so as to obtain new radiograph-related information; and

a visualizing section for visualizing the plural sets of image information with the new radiograph-related information on the single image plane.

2. The medical image processing system of claim 1, wherein the new radiograph-related information is visualized at a specified position in an enlarge form.

3. The medical image processing system of claim 1, wherein the radiographing section comprises a position information generating device for generating the position information which specifies the position of the radiograph-related information in the image information, and the extracting section extracts the radiograph-related information based on the position information.

4. The medical image processing system of claim 1, further comprising:

a setting section for setting the layout position for visualization of the radiograph-related information.

5. The medical image processing system of claim 1, wherein the calculating section divides the pixels in the area where the radiograph-related information is present.

6. The medical image processing system of claim 1, wherein the calculation conducted by the calculating section

comprises integration of the pixels at the same position pertaining to the plural sets of radiograph-related information.

7. The medical image processing system of claim 6, wherein the calculation comprises processing of averaging based on the numeral of the integration, subsequent to the integration.

8. The medical image processing system of claim 6, wherein the calculation comprises processing of binarization, subsequent to the integration.

9. The medical image processing system of claim 6, wherein the calculation comprises comparing to determine match or mismatch of pixels in the same position pertaining to the plural sets of radiograph-related information.

10. The medical image processing system of claim 9, wherein the comparing in the calculation carries out processing of comparing the pixels in the radiograph-related information based on combinations of the plural sets of radiograph-related information.

11. The medical image processing system of claim 10, wherein the combinations are decided by the steps of:

selecting the first radiograph-related information from the plural sets of radiograph-related information;

comparing pixels between the first radiograph-related information and the radiograph-related information other than first radiograph-related information;

selecting the second radiograph-related information from the second radiograph-related information and information other than the first radiograph-related information;

comparing pixels between this information and the radiograph-related information other than the first and second radiograph-related information;

selecting N-th radiograph-related information from the radiograph-related information other than the first and N-1-th radiograph-related information, wherein N is assumed as a parameter of natural number in excess of 2; and

comparing pixels between this information and the radiograph-related information other than 1st through N-th radiograph-related information in sequentially repeatedly

until N-1 becomes equal to the number of the radiograph-related information items.

12. The medical image processing system of claim 11, wherein the comparing which use the N-th radiograph-related information is not carried out in the combinations, if there is a match between the N-th radiograph-related information and N-1-th radiograph-related information.

13. The medical image processing system of claim 12, wherein the extracting section ensures that the pixels containing the greatest number of matched pixels among the mismatched pixels as a result of the calculation of comparing are the pixels of the new radiograph-related information.

14. The medical image processing system of claim 9, wherein the extracting section ensures that, when the number of the matched pixels has exceeded the threshold value, these pixels are those of the new radiograph-related information.

15. The medical image processing system of claim 1, further comprising:

a density reversing section for reversing the density of the new radiograph-related information on the plane.

16. The medical image processing system of claim 1, further comprising:

a setting section for setting the layout position for visualization of the radiograph-related information; and

a density reversing section for reversing the density of the new radiograph-related information on the plane.

17. The medical image processing system of claim 1, wherein the extracting section, the calculating section and visualizing section are comprised in an imager that prints the image information on the film sheet.

18. The medical image processing system of claim 16, wherein the extracting section, the calculating section, the visualizing section, the setting section and the density reversing section are comprised in an imager that prints the image information on the film sheet.

19. The medical image processing system of claim 4, wherein the visualizing section is comprised in an imager that prints

the image information on the film, wherein the extracting section, the calculating section, the visualizing section and setting section are comprised in one of the imager and a processor that process the image information.

20. The medical image processing system of claim 19, wherein the imager or the processor comprises the setting section and a density reversing section for reversing the density of the new radiograph-related information on the film sheet.

21. A medical image processing method for visualizing plural medical images of a subject in multi-format on a single image plane on one of a film sheet and a screen, comprising the steps of:

radiographing the subject so as to generate plural sets of image information in which each set of image information includes medical image information and radiograph-related information related to at least one of the subject and a radiographing section for radiographing;

extracting plural sets of radiograph-related information from the plural sets of image information;

conducting calculation for the plural sets of radiograph-related information so as to obtain new radiograph-related information; and

visualizing the plural sets of image information with the new radiograph-related information on the single image plane.

22. The medical image processing method of claim 21, wherein the new radiograph-related information is visualized at a specified position in an enlarge form.

23. The medical image processing method of claim 21, wherein the step of radiographing comprises:

generating the position information which specifies the position of the radiograph-related information in the image information,

wherein the step of extracting comprises:

extracting the radiograph-related information based on the position information.

24. The medical image processing method of claim 21, further comprising the step of:



setting a layout position for visualization of the radiograph-related information.

25. The medical image processing method of claim 21, wherein the step of calculating comprising: dividing the pixels in the area where the radiograph-related information is present.

26. The medical image processing method of claim 21, wherein the calculation conducted by the calculating comprises integration of the pixels at the same position pertaining to the plural sets of radiograph-related information.

27. The medical image processing method of claim 26, wherein the calculation comprises processing of averaging based on the numeral of the integration, subsequent to the integration.

28. The medical image processing method of claim 26, wherein the calculation comprises processing of binarization, subsequent to the integration.

29. The medical image processing method of claim 26, wherein the calculation comprises comparing to determine match or mismatch of pixels in the same position pertaining to the plural sets of radiograph-related information.

30. The medical image processing method of claim 29, wherein the comparing in the calculation carries out processing of comparing the pixels in the radiograph-related information based on combinations of the plural sets of radiograph-related information.

31. The medical image processing method of claim 30, wherein the combinations are decided by the steps of:

- selecting the first radiograph-related information from the plural sets of radiograph-related information;

- comparing pixels between the first radiograph-related information and the radiograph-related information other than first radiograph-related information;

- selecting the second radiograph-related information from the second radiograph-related information and information other than the first radiograph-related information;

comparing pixels between this information and the radiograph-related information other than the first and second radiograph-related information;

selecting N-th radiograph-related information from the radiograph-related information other than the first and N-1-th radiograph-related information, wherein N is assumed as a parameter of natural number in excess of 2; and

comparing pixels between this information and the radiograph-related information other than 1st through N-th radiograph-related information in sequentially repeatedly until N-1 becomes equal to the number of the radiograph-related information items.

32. The medical image processing method of claim 31, wherein the comparing which use the N-th radiograph-related information is not carried out in the combinations, if there is a match between the N-th radiograph-related information and N-1-th radiograph-related information.

33. The medical image processing method of claim 32, wherein the step of extracting ensures that the pixels containing the greatest number of matched pixels among the

mismatched pixels as a result of the calculation of comparing are the pixels of the new radiograph-related information.

34. The medical image processing method of claim 39, wherein the step of extracting ensures that, when the number of the matched pixels has exceeded the threshold value, these pixels are those of the new radiograph-related information.

35. The medical image processing method of claim 21, further comprising the step of:

density reversing for reversing the density of the new radiograph-related information on the plane.

36. The medical image processing method of claim 21, further comprising the steps of:

setting a layout position for visualization of the radiograph-related information; and

density reversing for reversing the density of the new radiograph-related information on the plane.